

## ABSTRACT

2 The invention is directed to amphipathic polymeric particles that serve as both the  
3 dispersant and the binder in water based inks, ink compositions containing these  
4 particles, and methods for making the particles. The polymeric particles contain both  
5 hydrophilic and hydrophobic moieties with a pre-determined structure, and have an  
6 average diameter of 50 to 500 nm. The amphipathic polymeric particles may be prepared  
7 by a side-chain conversion method or a polymerization process involving an ATRP step,  
8 with or without a cross-linking agent. This invention improves the stability of polymer  
9 and inks by both ionic and steric stabilization of the suspended polymer particles.